UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,836	10/06/2003	Douglas W. Wager	CRNI.108473	3738

46169   7590   08/31/2010
SHOOK, HARDY & BACON L.L.P.
(Cerner Corporation)
Intellectual Property Department
2555 GRAND BOULEVARD
KANSAS CITY, MO 64108-2613

EXAMINER
RAJ, RAJIV J

ART UNIT	PAPER NUMBER
3686	

MAIL DATE	DELIVERY MODE
08/31/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/679,836	WAGER ET AL.
	Examiner	Art Unit	
	RAJIV J. RAJ	3686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 August 2010</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,2,5-7,9-24 and 39-49</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1,2,5-7,9-24 and 39-49</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>04 August 2010</u>.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 August 2010 has been entered.

Status of Claims

2.   This action is in reply to the amendment filed on 04 August 2010..

3.   Claims 12 & 39 have been amended.

4.   Claims 1-2, 5-7, 9-24 and 39-49 are currently pending and have been examined.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   In light of the amendments to claims 1-24 & 39-40, the previous rejection under 35 U.S.C. 101, is withdrawn.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

> 1.   Determining the scope and contents of the prior art.
> 2.   Ascertaining the differences between the prior art and the claims at issue.
> 3.   Resolving the level of ordinary skill in the pertinent art.
> 4.   Considering objective evidence present in the application indicating obviousness or
> nonobviousness.

9.   Claims 1-2, 5, 7-17, 19-24, & 40 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Whiting-O'Keefe (US 6061657) in view of Pollack (US 5809477) in

view of Andre et al. (US 7155399 B2) (hereinafter Andre) in further view of Zaleski

(US 2003/0101076 A1) (Zaleski).

As per claim 1

Whiting-O'Keefe as shown, teaches the following limitation:

- *determining a type of patient population that the particular patient is a member of;*

  (see at least Whiting-O'Keefe Claims:1,2,6 & 44 and Fig:3 & related text)

- *calculating, with a computer processor, . . . the particular patient. . . ;* (see at

  least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 Fig:6,7 Fig:9 Items:161-179 &

  related text)

Whiting-O'Keefe fails to teach the following limitations, however Pollack does:

- *obtaining patient data for the particular patient directly from a primary clinical information systems;* (see at least Pollack Fig:2 Item:210 Fig:3 Item:310 & related text)

- *comparing the data for the particular patient to the work factors to determine which factors are satisfied;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

- *accessing a weighted value for each satisfied work factor;* (see at least Pollack Fig:3,5,6 & related text)

- *assigning each satisfied work factor with a weighted score;* (see at least Pollack Fig:2 Items:200-230 Fig:3 Items:200-340 Fig:4 Items:400-450 & related text)

- *accessing work factors for the type of patient population;* (see at least Pollack Fig:3,5,6 & related text)

- *a work score for . . . using the satisfied work factors;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

- *. . .work score factors;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe. One of ordinary skill in the art would have added these features into Whiting-O'Keefe with the motivation of providing higher quality medical

care while being more efficient with medical resources. (see at least Pollack

Column:3 Lines:30-38)

Whiting-O'Keefe/Pollack fails to teach the following limitations, however Andre does:

- *wherein the work score indicates a quantity of personnel hours anticipated to*

  serve particular patient; (see at least Andre Fig:2 Items:402-428 Fig:3 Item:202-

  208, 214 Fig:4 Items:310, 320 & related text)

It would have been obvious to one of ordinary skill in the art to add these features

of Andre into Whiting-O'Keefe/Pollack. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack with the motivation of providing

an improved invention for assessing, determining and implementing appropriate staff

to provide the best service for users, such as customers, clients and patients. (see

at least Andre Column:2 Lines:52-67 Column:3 Lines:1-3)

Whiting-O'Keefe/Pollack fails to teach the following limitations, however Andre does:

- *storing the particular patient's . . .;* (see at least Zaleski Claims:13 Fig:3

  Item:202-208, 214 & related text)

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Pollack/Andre. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack/Andre with the motivation of

providing system for improved clinical decision making, in order to provide more

efficient and effective healthcare. (see at least Zaleski [0012])

As per claim 2

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 1. Whiting-O'Keefe discloses the following limitation:

- *receiving a request for a particular patient's work score;* (see at least Whiting-O'Keefe Fig:2 Items:17 & related text)

As per claim 5

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 4. Pollack discloses the following limitation:

- *each work factor has one or more assigned weighted values;* (see at least Pollack Column:17 Line:67 & Column:18 Lines:1-5 "At Item 320, a numerical value based on patient information is assigned for each category of diagnostic information and for each group of categories. Rules and guidelines for the assignment of numerical values are set forth in the detailed descriptions of the scoring methodologies set forth above")

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre/Zaleski. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre/Zaleski with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38)

As per claim 7

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 5. Whiting-O'Keefe discloses the following limitation:

- *obtaining rules for generating a work score for the particular patient;* (see at least Whiting-O'Keefe Column:8 Lines:45-62)

As per claim 9

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 1. Whiting-O'Keefe discloses the following limitation:

- *the patient data is one of outstanding orders, outstanding tasks, completed orders, completed tasks, services provided by personnel over a period of time, scheduled procedures, scheduled outpatient care, assigned tasks, assigned orders, assessments, tasks, services typically delivered for a specific patient or patient type and combinations thereof* (see at least Whiting-O'Keefe Column:4 Lines:50-67)

As per claim 10

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 1. Whiting-O'Keefe discloses the following limitation:

- *wherein the work score is prospective* (see at least Whiting-O'Keefe Fig:10 Items:193 & related text)

As per claim 11

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 1. Whiting-O'Keefe discloses the following limitation:

- *wherein the work score is retrospective* (see at least Whiting-O'Keefe Fig:10 Items:191 & related text)

As per claim 12

Whiting-O'Keefe as shown, teaches the following limitation:

- *determining a type of patient population that each of the one or more patients are a member of;* (see at least Whiting-O'Keefe Claims:1,2,6 & 44 and Fig:3 & related text)

- *accessing work factors for the type of patient population;* (see at least Whiting-O'Keefe Fig:3 Items:33-45 & related text)

- *calculating, with the processor, . . . for each of the one or more patients in a patient population;* (see at least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 Fig:6-7 Fig:9 Items:161-179 & related text)

Whiting-O'Keefe fails to teach the following limitations, however Pollack does:

- *obtaining patient data for one or more patients in a patient population directly from a primary clinical information systems;* (see at least Pollack Fig:2 Item:210 Fig:3 Item:310 & related text)

- *comparing the patient data for each of the one or more patients to the work factors to determine which factors are satisfied;* (see at least Pollack Fig:3-6 Items:500-655 & related text)

- *accessing a weighted value for each satisfied work factor;* (see at least Pollack Fig:3,5,6 & related text)

- *assigning each satisfied work factor with a weighted score;* (see at least Pollack Fig:2 Items:200-230 Fig:3 Items:200-340 Fig:4 Items:400-450 & related text)

- *calculating staffing needs for the patient population based on the work scores obtained for the oe or more patients in the patient population* (see at least Pollack Claim:1 (b)-(d))

- *a work score for . . . using the satisfied work factors;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

- *. . . .one or more work scores . . . ;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe. One of ordinary skill in the art would have added these features into Whiting-O'Keefe with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38)

Whiting-O'Keefe/Pollack fails to teach the following limitations, however Andre does:

- *wherein the work score indicates a quantity of personnel hours anticipated to serve each of the one or more patients;* (see at least Andre Fig:2 Items:402-428 Fig:3 Item:202-208, 214 Fig:4 Items:310, 320 & related text)

It would have been obvious to one of ordinary skill in the art to add these features of Andre into Whiting-O'Keefe/Pollack. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack with the motivation of providing an improved invention for assessing, determining and implementing appropriate staff

to provide the best service for users, such as customers, clients and patients. (see

at least Andre Column:2 Lines:52-67 Column:3 Lines:1-3)

Whiting-O'Keefe/Pollack/Andre fails to teach the following limitations, however

Zaleski does:

- *storing . . . for the one or more patients in the patient population;* (see at least

   Zaleski Claims:13 Fig:3 Item:202-208, 214 & related text)

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Pollack/Andre. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack/Andre with the motivation of

providing system for improved clinical decision making, in order to provide more

efficient and effective healthcare. (see at least Zaleski [0012])

As per claim 13

   The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the

limitations of claim 12. Whiting-O'Keefe discloses the following limitation:

- *receiving a request for a particular patient in the work score for the patient*

   population; (see at least Whiting-O'Keefe Fig:1 A-C)

As per claim 14

   The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the

limitations of claim 13. Whiting-O'Keefe discloses the following limitation:

- *determining the patients in the population;* (see at least Whiting-O'Keefe Fig:3

   Item:31)

As per claim 15

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 14. Whiting-O'Keefe discloses the following limitation:

- *obtaining the work factors for the population* (see at least Whiting-O'Keefe Fig:3 Item:33-37)

As per claim 16

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 15. Whiting-O'Keefe discloses the following limitation:

- *determining which of the factors are triggered by the data for the particular patient in the population;* (see at least Whiting-O'Keefe Claim:20 "solving an estimate model of a total amount of charges for the encounters within a summary record as a function of a plurality of model variables and regression coefficients taken or derivable from the data within said at least one summary record, said regression coefficients having been previously determined with the same estimate model to optimize a fit of said estimate model for a population of patients with data within a summary record corresponding to said at least one summary record)

As per claim 17

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 15. Pollack discloses the following limitation:

- *wherein each factor has an assigned value* (see at least Pollack Column:17 Line:67 & Column:18 Lines:1-5 "At Item 320, a numerical value based on patient information is assigned for each category of diagnostic information and for each group of categories. Rules and guidelines for the assignment of numerical values are set forth in the detailed descriptions of the scoring methodologies set forth above")

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre/Zaleski. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre/Zaleski with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38)

As per claim 19

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 17. Whiting-O'Keefe discloses the following limitation:

- *obtaining rules for generating a work score for a particular patient in the population* (see at least Whiting-O'Keefe Column:8 Lines:45-62)

As per claim 20

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 19. Whiting-O'Keefe discloses the following limitation:

- *utilizing the rules and values of factors triggered by the data to generate a work score for the particular patient in the patient population;* (see at least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 & related text)

As per claim 21

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 20. Whiting-O'Keefe discloses the following limitation:

- *accumulating the work scores for all patients in the population;* (see at least Whiting-O'Keefe Claim:17)

As per claim 22

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 21. Pollack discloses the following limitation:

- *obtaining staffing standards for the population* (see at least Pollack Fig:2 Items:220 Fig:6 Items:645 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre/Zaleski. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre/Zaleski with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38)

As per claim 23

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the limitations of claim 22. Pollack discloses the following limitation:

- *calculating staffing needs based on the work scores obtained for the patients in*

   the patient population and the staffing standards for the population; (see at least

   Pollack Claim:1 (b)-(d))

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Pollack/Andre/Zaleski. One of ordinary skill in the art would

have added these features into Whiting-O'Keefe/Pollack/Andre/Zaleski with the

motivation of providing higher quality medical care while being more efficient with

medical resources. (see at least Pollack Column:3 Lines:30-38)

As per claim 24

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the

limitations of claim 12. Whiting-O'Keefe discloses the following limitation:

- *the data is one of outstanding orders, outstanding tasks, completed orders,*

   completed tasks, services provided by personnel over a period of time,

   scheduled procedures, scheduled outpatient care, assigned tasks, assigned

   orders, assessments, tasks, services typically delivered for a specific patient or

   patient type and combinations thereof (see at least Whiting-O'Keefe Column:4

   Lines:50-67)

As per claim 40

Whiting-O'Keefe as shown, teaches the following limitation:

- *calculating, with a computer processor, a work score for each patient in a patient*

   population utilizing data obtained directly from a primary clinical information

system; (see at least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 Fig:9 Items:161-

179 & related text)

Whiting-O'Keefe fails to teach the following limitations, however Pollack does:

• *calculating staffing needs for the patient population based on the work scores*

   obtained for each patient in the patient population (see at least Pollack Claim:1

   (b)-(d))

• *. . . the work score . . . .;* (see at least Pollack Fig:3-6 & related text)

   It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe. One of ordinary skill in the art would have added these

features into Whiting-O'Keefe with the motivation of providing higher quality medical

care while being more efficient with medical resources. (see at least Pollack

Column:3 Lines:30-38)

Whiting-O'Keefe/Pollack fails to teach the following limitations, however Andre does:

• *wherein the work score is a quantity of personnel hours required to serve each*

   patient in the patient population by a healthcare provider; (see at least Andre

   Fig:2 Items:402-428 Fig:3 Item:202-208, 214 Fig:4 Items:310, 320 & related text)

   It would have been obvious to one of ordinary skill in the art to add these features

of Andre into Whiting-O'Keefe/Pollack. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack with the motivation of providing

an improved invention for assessing, determining and implementing appropriate staff

to provide the best service for users, such as customers, clients and patients. (see

at least Andre Column:2 Lines:52-67 Column:3 Lines:1-3)

Whiting-O'Keefe/Pollack/Andre fails to teach the following limitations, however

Zaleski does:

- *storing . . . for each patients;* (see at least Zaleski Claims:13 Fig:3 Item:202-208,

  214 & related text)

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Pollack/Andre. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack/Andre with the motivation of

providing system for improved clinical decision making, in order to provide more

efficient and effective healthcare. (see at least Zaleski [0012])

10.   Claims 6, 18, 39 & 49 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Whiting-O'Keefe in view of Pollack in view of Andre in view of Zaleski in further

view of Richardson et al. (US 6193654 B1) (hereinafter Richardson).

As per claim 6

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the

limitations of claim 5. Richardson further discloses the following limitation:

- *adjusting the weighted value of one or more work factors triggered by the patient*

  data based on rules; (see at least Richardson Claim:19 (g) "At Item 320, a

  numerical value based on patient information is assigned for each category of

  diagnostic information and for each group of categories. Rules and guidelines for

the assignment of numerical values are set forth in the detailed descriptions of

the scoring methodologies set forth above")

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Pollack/Andre/Zaleski. One of ordinary skill in the art would

have added these features into Whiting-O'Keefe/Pollack/Andre/Zaleski with the

motivation of providing optimal healthcare through accurate monitoring of medical

parameters. (see at least Richardson Column:3 Lines:36-48)

As per claim 18

The combination of Whiting-O'Keefe/Pollack/Andre/Zaleski discloses all of the

limitations of claim 17. Richardson further discloses the following limitation:

- *adjusting the value of one or more factors triggered by the data;* (see at least

   Richardson Claim:19 (g) "At Item 320, a numerical value based on patient

   information is assigned for each category of diagnostic information and for each

   group of categories. Rules and guidelines for the assignment of numerical

   values are set forth in the detailed descriptions of the scoring methodologies set

   forth above")

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Pollack/Andre/Zaleski. One of ordinary skill in the art would

have added these features into Whiting-O'Keefe/Pollack/Andre/Zaleski with the

motivation of providing optimal healthcare through accurate monitoring of medical

parameters. (see at least Richardson Column:3 Lines:36-48)

As per claim 39

Whiting-O'Keefe as shown, teaches the following limitation:

- *determining a type of patient population that the particular patient is a member of;* (see at least Whiting-O'Keefe Claims:1,2,6 & 44 and Fig:3 & related text)

- *accessing work factors for the type of patient population;* (see at least Whiting-O'Keefe Fig:3 Items:33-45 & related text)

- *utilizing the weighted score a first instance of a work score for the particular patient using the satisfied work factors;* (see at least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 Fig:6,7 Fig:9 Items:161-179 & related text)

- *determining a type of patient population that the patient is a member of;* (see at least Whiting-O'Keefe Claims:1,2,6 & 44 and Fig:3 & related text)

- *accessing work factors for the type of patient population;* (see at least Whiting-O'Keefe Fig:3 Items:33-45 & related text)

- *utilizing the weighted score to calculate a second instance of a work score for the particular patient using the satisfied work factors;* (see at least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 Fig:6,7 Fig:9 Items:161-179 & related text)

Whiting-O'Keefe fails to teach the following limitations, however Pollack does:

- *obtaining patient data for a particular patient at a first point in time directly from a primary clinical information systems;* (see at least Pollack Fig:2 Item:210 Fig:3 Item:310 & related text)

- *comparing the patient data for the particular patient to the work factors to determine which factors are satisfied;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

- *accessing weighted value for each satisfied work factor;* (see at least Pollack Fig:3,5,6 & related text)

- *assigning each satisfied work factor with a weighted score;* (see at least Pollack Fig:2 Items:200-230 Fig:3 Items:200-340 Fig:4 Items:400-450 & related text)

- *obtaining patient data for the particular patient at a second point in time directly from a primary clinical information systems;* (see at least Pollack Fig:2 Item:210 Fig:3 Item:310 & related text)

- *comparing the patient data for the particular patient to the work factors to determine which factors are satisfied;* (see at least Pollack Fig:5&6 Items:500-655 & related text)

- *accessing weighted value for each satisfied work factor;* (see at least Pollack Fig:3,5,6 & related text)

- *assigning each satisfied work factor with a weighted score;* (see at least Pollack Fig:2 Items:200-230 Fig:3 Items:200-340 Fig:4 Items:400-450 & related text)

- *wherein the first instance of a work score is compared to a second instance of a work score for the particular patient based on the patient data in the primary clinical information system;* (see at least Pollack Fig:5&6 Items:545-645 & related text)

- *. . . work score;* (see at least Pollack Fig:3-6 & related text)

- *. . . work score;* (see at least Pollack Fig:3-6 & related text)

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe. One of ordinary skill in the art would have added these

features into Whiting-O'Keefe with the motivation of providing higher quality medical

care while being more efficient with medical resources. (see at least Pollack

Column:3 Lines:30-38)

Whiting-O'Keefe/Pollack fails to teach the following limitations, however Andre does:

- *wherein the first instance of a work score includes a measure of personnel hours*

   anticipated for the particular patient at a first point in time; (see at least Andre

   Fig:2 Items:402-428 Fig:3 Item:202-208, 214 Fig:4 Items:310, 320 & related text)

It would have been obvious to one of ordinary skill in the art to add these features

of Andre into Whiting-O'Keefe/Pollack. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack with the motivation of providing

an improved invention for assessing, determining and implementing appropriate staff

to provide the best service for users, such as customers, clients and patients. (see

at least Andre Column:2 Lines:52-67 Column:3 Lines:1-3)

Whiting-O'Keefe/Pollack/Andre fails to teach the following limitations, however

Richardson does:

- *trending the work score for the particular patient;* (see at least Richardson Fig:3

   & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre with the motivation of providing optimal healthcare through accurate monitoring of medical parameters. (see at least Richardson Column:3 Lines:36-48)

Whiting-O'Keefe/Pollack/Andre/Richardson fails to teach the following limitations, however Zaleski does:

- *storing the first instance; . . .* (see at least Zaleski Claims:13 Fig:3 Item:202-208, 214 & related text)

- *storing the second instance . . .;* (see at least Zaleski Claims:13 Fig:3 Item:202-208, 214 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre/Richardson. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre/Richardson with the motivation of providing system for improved clinical decision making, in order to provide more efficient and effective healthcare. (see at least Zaleski [0012])

As per claim 49

The combination of Whiting-O'Keefe/Pollack/Andre//Zaleski Richardson discloses all of the limitations of claim. Pollack further discloses the following limitation:

- *further comprises more than two instances of a work score for the particular patient based on the patient's data in the primary clinical information system;* (see at least Pollack Fig:5&6 Items:545-645 & related text)

  It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre/Richardson. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre/Richardson with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38) Whiting-O'Keefe/Pollack/Andre/Richardson fails to teach the following limitations, however Richardson does:

- *trending the work score for the particular patient;* (see at least Richardson Fig:3 & related text)

  It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack/Andre/Richardson. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack/Andre/Richardson with the motivation of providing optimal healthcare through accurate monitoring of medical parameters. (see at least Richardson Column:3 Lines:36-48)

11. Claims 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whiting-O'Keefe in view Pollack in further view of Zaleski.

As per claim 41

Whiting-O'Keefe as shown, teaches the following limitation:

- *a work calculation module for calculating a work score for one or more patients;*

  (see at least Whiting-O'Keefe Fig:2 Items:17-29 Fig:3 & related text)

  System claim 41 repeats the subject matter of method claim 1 respectively, as a

  system rather than a series of steps. As the underlying process of claim 1 has been

  shown to be fully disclosed by the teachings of Whiting-O'Keefe in the above

  rejection of claim 1, it is readily apparent that the limitations disclosed by Whiting-

  O'Keefe include the apparatus to perform these functions. As such, these limitations

  are rejected for the same reasons given above for method claim 1 and incorporated

  herein.

- *receiving input from the work calculation nodule about prospective workload;*

  (see at least Whiting O'Keefe Fig:2&3 Items:17-45 & related text)

- *a demand forecast module for forecasting the volume and type of patients who*

  will present; (see at least Whiting-O'Keefe Fig:3 Items:43-45 & related text)

- *communicating information regarding a forecasted demand generated by the*

  demand forecast module to the work calculation module and communication

  information; (see at least Whiting O'Keefe Column:12 Lines:62-67 Column:13

  Lines:1-15 Fig:3 Items:43-45 & related text)

- *a resource dashboard module for . . . displaying information regarding personnel*

  and patients (see at least Whiting-O'Keefe Fig:9 Items:163, 175-179 & related

  text)

- *receiving work calculations for the patient population from the work calculation module;* (see at least Whiting O'Keefe Fig:2&3 Items:17-45 & related text)

Whiting-O'Keefe fails to teach the following limitations, however Pollack does:

- *to help determine anticipated clinical demand;* (see at least Pollack Claims:1 (b-d) Fig:2 Items:22 Fig:6 Items:640 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe. One of ordinary skill in the art would have added these features into Whiting-O'Keefe with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38)

Whiting-O'Keefe/Pollack fails to teach the following limitations, however Zaleski does:

- *a staff scheduling and staffing module for . . . identifying healthcare personnel positions to be filled;* (see at least Zaleski [0007], Fig:1 Items:108, 109 & related text)

- *the staff scheduling and staffing module;* (see at least Zaleski [0007], Fig:1 Items:108, 109 & related text)

- *a role management module for managing the roles and information regarding personnel;* (see at least Zaleski [0005]-[0007])

- *a workforce outcomes module for determining how effectively healthcare personnel have been used;* (see at least Zaleski [0005]-[0007])

- *receiving information regarding staff scheduling from the staff scheduling and staffing module;* (see at least Zaleski [0005-0007] Claim:1 Fig:1 Items:108-109 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Pollack. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Pollack with the motivation of providing system for improved clinical decision making, in order to provide more efficient and effective healthcare. (see at least Zaleski [0012]) Zaleski (US 2003/0101076 A1).

12.   Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whiting-O'Keefe in view of Zaleski in further view of Ross, Jr. et al. (US 7076436 B1) (hereinafter Ross).

As per claim 42

The combination of Whiting-O'Keefe/Zaleski discloses all of the limitations of claim 41. Ross further discloses the following limitation:

- *an enterprise scheduling module for identifying information regarding appointments for outpatient procedures* (see at least Ross Fig:4 Items:102, 116-118 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Zaleski. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Zaleski with the motivation of providing more

accuracy of patients and medical resources in order to allow more effective care by

hospital personnel. (see at least Ross Column:1 Lines:9-13)

As per claim 43

The combination of Whiting-O'Keefe/Zaleski discloses all of the limitations of

claim 42. Ross further discloses the following limitation:

- *an enterprise scheduling module for identifying information regarding*

  appointments for outpatient procedures (see at least Ross Fig:7 Items:138 &

  related text)

It would have been obvious to one of ordinary skill in the art to add these features

into Whiting-O'Keefe/Zaleski. One of ordinary skill in the art would have added

these features into Whiting-O'Keefe/Zaleski with the motivation of providing more

accuracy of patients and medical resources in order to allow more effective care by

hospital personnel. (see at least Ross Column:1 Lines:9-13)

13.   Claims 44 & 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Whiting-O'Keefe in view of Zaleski, in view of Ross, in further view of Richardson.

As per claim 44

The combination of Whiting-O'Keefe/Zaleski/Ross discloses all of the limitations

of claim 43. Richardson further discloses the following limitation:

- *a registration module for identifying and tracking patient registration, census*

  and activity (see at least Richardson Column:6 Lines:45-54)

It would have been obvious to one of ordinary skill in the art to add these

features into Whiting-O'Keefe/Pollack. One of ordinary skill in the art would have

added these features into Whiting-O'Keefe/Pollack with the motivation of providing

optimal healthcare through accurate monitoring of medical parameters. (see at least

Richardson Column:3 Lines:36-48)

As per claim 45

The combination of Whiting-O'Keefe/Zaleski/Ross/Richardson discloses all of the

limitations of claim 44. Whiting-O'Keefe further discloses the following limitation:

- *a medical records module for capturing and storing patient data* (see at least

   Whiting-O'Keefe Column:7 Lines:34-47 Fig:9 Items:161-179 & related text)

14.   Claims 46 & 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Whiting-O'Keefe in view of Zaleski, in view of Ross, in view of Richardson, in further

view of Pollack.

As per claim 46

The combination of Whiting-O'Keefe/Zaleski/Ross/Richardson discloses all of the

limitations of claim 45. Pollack further discloses the following limitation:

- *a patient severity module for providing information regarding the status and*

   conditions of patients (see at least Pollack Column:9 Lines:49-51, Fig:3, &

   related text)

It would have been obvious to one of ordinary skill in the art to add these

features into Whiting-O'Keefe/Zaleski/Richardson/Ross. One of ordinary skill in the

art would have added these features into Whiting-O'Keefe/Zaleski/Richardson/Ross with the motivation of providing higher quality medical care while being more efficient with medical resources. (see at least Pollack Column:3 Lines:30-38)

As per claim 47

The combination of Whiting-O'Keefe/Zaleski/Ross/Richardson discloses all of the limitations of claim 46. Ross further discloses the following limitation:

- *a departmental tracking module for tracking patients through different departments* (see at least Ross Fig:2 Item:102 & related text)

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Zaleski/Richardson/Ross. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Zaleski/Richardson/Ross with the motivation of providing more accuracy of patients and medical resources in order to allow more effective care by hospital personnel. (see at least Ross Column:1 Lines:9-13)

15.   Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whiting-O'Keefe in view of Zaleski, in view of Ross, in view of Richardson, in view of Pollack, in further view of Brandt et al. (US 2003/0050797 A1) (hereinafter Brandt).

As per claim 48

The combination of Whiting-O'Keefe/Zaleski/Ross/Richardson/Pollack discloses all of the limitations of claim 47. Brandt further discloses the following limitation:

- *a personal work queue module for tracking and displaying work to be performed by individual personnel* (see at least Brandt [0005])

It would have been obvious to one of ordinary skill in the art to add these features into Whiting-O'Keefe/Zaleski/Ross/Richardson/Pollack. One of ordinary skill in the art would have added these features into Whiting-O'Keefe/Zaleski/Ross/Richardson/Pollack with the motivation of providing optimal workflow management in a healthcare setting for efficient and effective healthcare for patients. (see at least Brandt [0004])

Response to Arguments

16.   Applicant's arguments received on 04 August 2010 have been fully considered but they are not persuasive.

17.   In response to applicant's amendment that Whiting-O'Keefe fails to disclose to ". . . *a work score . . . using the satisfied work factors"* Examiner points out that this cited by Pollack, as clarified in the Office Action above.

18.   In response to applicant's arguments on page 13 (Applicant's Remarks) regarding the flaws in Whiting-O'Keefe the Examiner points out that much of the argued claim-language is not cited by Whiting-O'Keefe thus they are irrelevant.

19.   In response to applicant's arguments on page 14 (Applicant's Remarks) regarding the flaws in Pollack the Examiner points out that much of the argued claim-language is not cited by Pollack thus they are irrelevant. Further, applicant's arguments

are based substantially on the purpose of invention from Pollack, which is addressed below.

20.   In response to applicant's argument that cited prior art is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

21.   In response to applicant's argument that Andre does no disclose "*wherein the work score indicates a quantity of personnel hours anticipated to serve the particular patient*" because Andre discloses a "work score generated and assigned by a schedule evaluator based on employee schedule changes", the Examiner has fully considered applicant's arguments and finds them unpersuasive because these features are not patently distinct.

22.   Applicant's arguments supporting the allowability of claims 2, 5-7 & 9-11 are based on their dependency on claim 1, and thus are rejected on the same grounds.

23.   In response to applicant's argument regarding claim language "*obtaining patient data for one or more patients in a patient population directly from a primary clinical information system*" not be related to the reference of Whiting-O'Keefe, the Examiner finds this argument unpersuasive because Whiting-O'Keefe is not cited for this claim language and Whiting-O'Keefe is appropriately combined with the cited prior art for 35 U.S.C. 103 rejection.

24.   In response to applicant's argument that Andre does no disclose "*quantity of*

personnel hours anticipated to serve each of the one or more patients", the Examiner

has fully considered applicant's arguments and finds them unpersuasive because these

features are not patently distinct.

25.   Applicant's arguments supporting the allowability of claims 13-24 are based on

their dependency on claim 12, and thus are rejected on the same grounds.

26.   Applicant's arguments for claims 39 & 40-41 are substantially similar to those for

claims 1 & 12 and thus are rejected on substantially similar grounds.

27.   Applicant's arguments supporting the allowability of claim 49 is based on their

dependency on claim 39, and thus are rejected on the same grounds.

28.   In response to applicant's arguments regarding prior art reference, Zaleski, the

Examiner has fully considered applicant's arguments and find them unpersuasive. The

applicant's arguments do not address claim language cited by Zaleski & the rest of

applicant's arguments are merely the unsupported assertions of the applicant.

29.   Applicant's arguments supporting the allowability of claim 41 is based on their

dependency on claims 42-48, and thus are rejected on the same grounds.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Rajiv J. Raj** whose telephone number is **(571) 270-3930.** The Examiner can normally be reached on Monday-Friday, 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **Jerry O'Connor** can be reached at **571.272.6787**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair <http://pair-direct.uspto.gov >. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to **(571) 273-8300**.

Hand delivered responses should be brought to the **United States Patent and**

Trademark Office Customer Service Window:

Randolph Building
401 Dulany Street
Alexandria, VA 22314.

Date: 08/26/10
/RJR/
Patent Examiner Art Unit 3686

/Gerald J. O'Connor/
Supervisory Patent Examiner
Group Art Unit 3686